The Impact of Information Technology Changes on Organizational Culture

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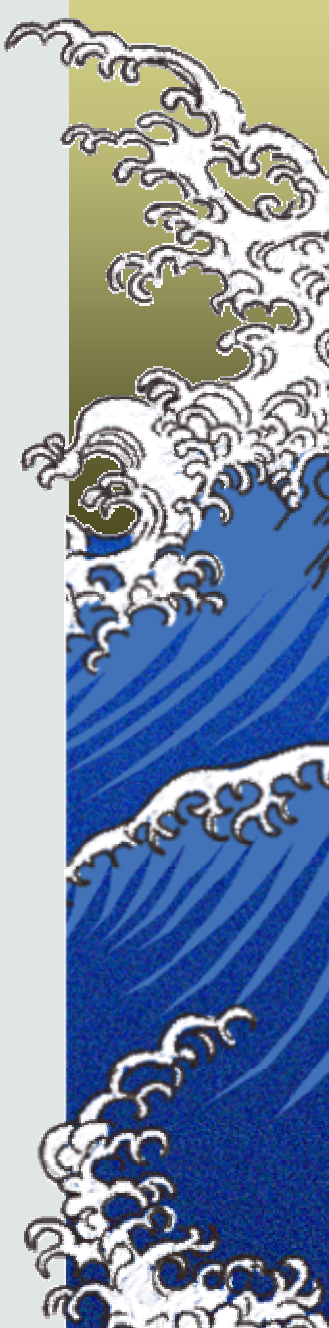
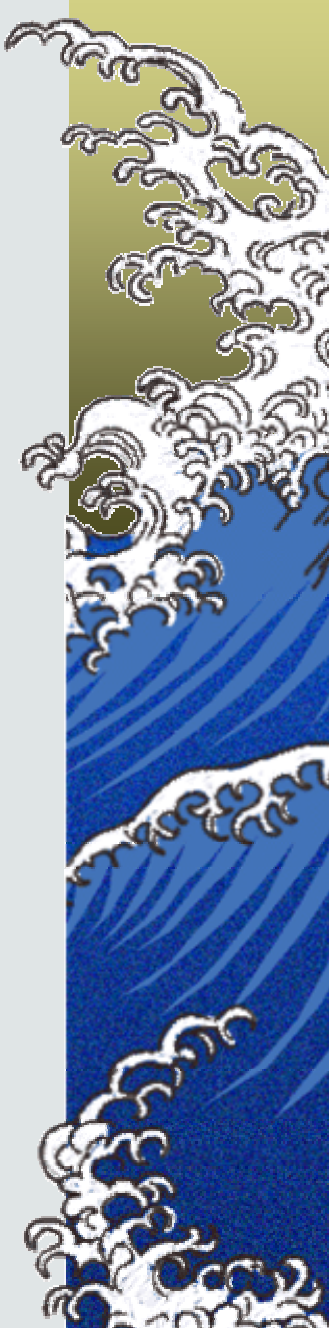


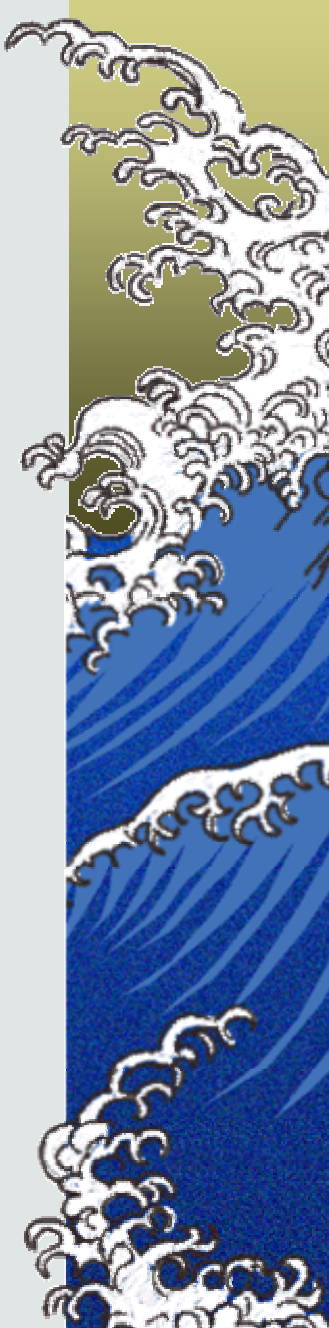
Overview

- Potential Impact of Technology Changes
- Washington Public Health Standards Process
- Workforce Considerations
- Public Health Informatics Competencies
- Recommendations



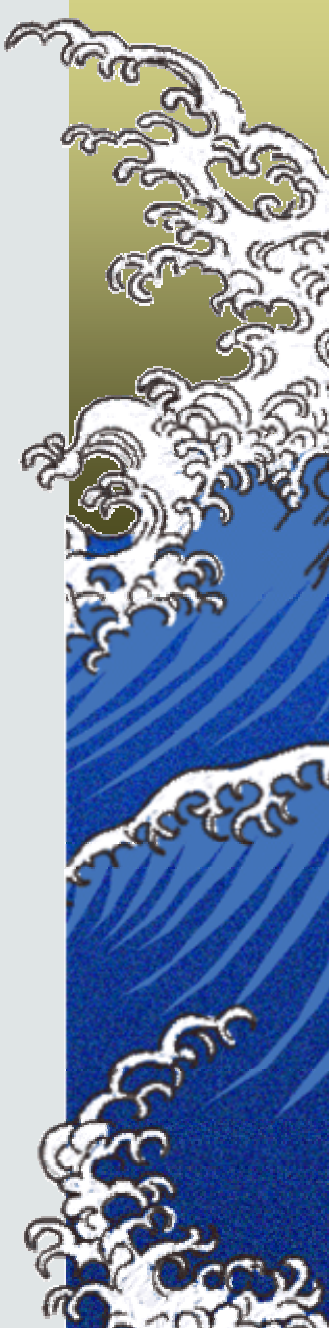
Impact of Technology Changes

- Business Operations
  - Streamline information flow
    - Information flow may be changed from multiple entry points to single entry point.
  - Change business processes
    - Work that had been done by administrative staff (ie, data entry from paper forms) may be done by epidemiology staff (ie, enter data directly into system during telephone interviews).



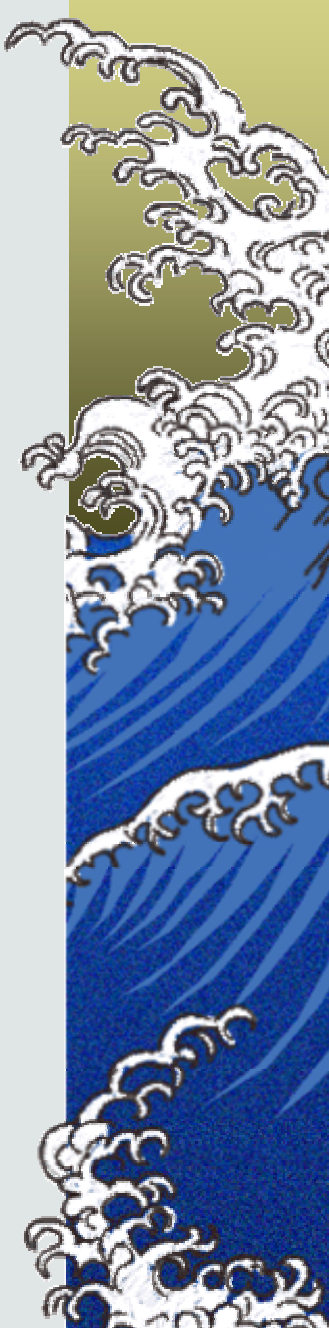
Impact of Technology Changes

- PHIN Example – Function 9: Security
  - Before – Password and ID Authentication
  - After – Digital Certificates and Tokens
  - Impact on staff –
    - Need to understand digital certificates and carry tokens
    - Need to commit to higher level of security
    - Less ability to share accounts



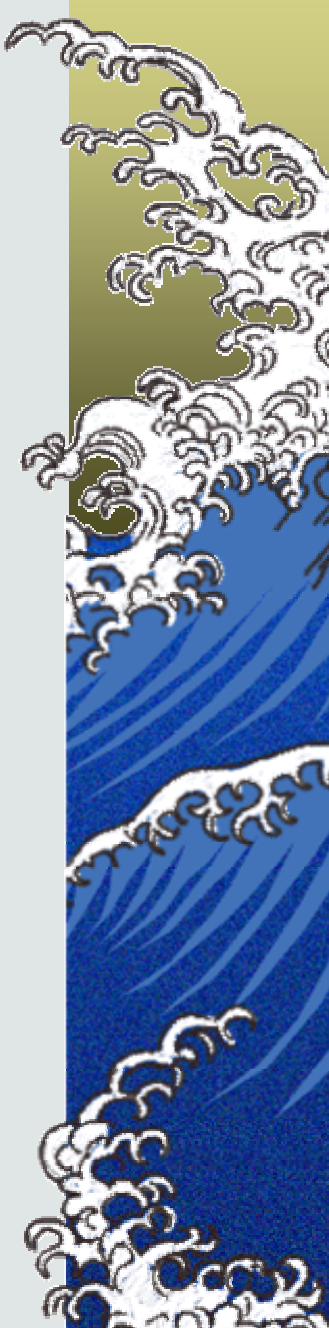
Impact of Technology Changes

- Organizational Culture
  - Reaching agreement between organizations on standards and processes
    - Life is easier if you only have yourself to satisfy
  - Culture of collaboration, not independence
    - Ditto

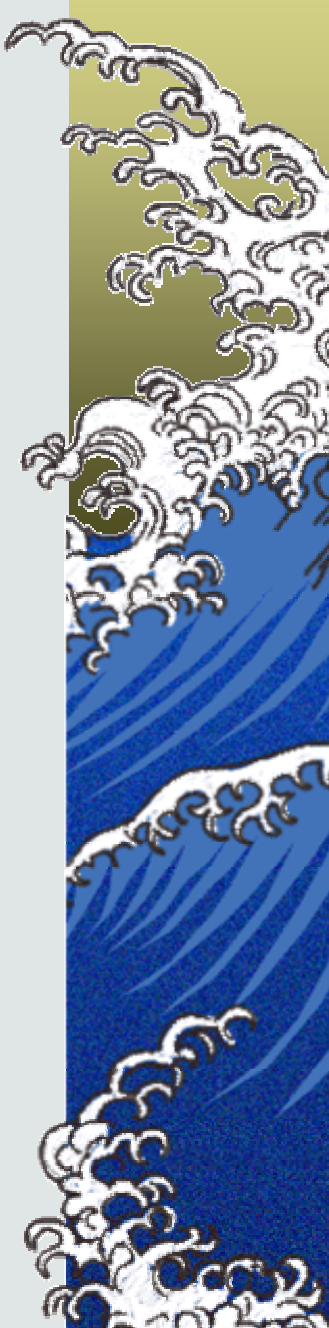


Impact of Technology Changes

- PHIN Example – Function 4: Lab Data Standards
  - Before – No limitations on choice of data format or vocabulary
  - After – Standardization on LOINC and SNOMED
  - Impact on Staff –
    - Need to learn new codes
    - Need to modify reporting products to accommodate new codes



IT is not the only influence on organizational culture. Any standardization process results in cultural change.



Standards for Public Health in Washington State

- In 1993 state Legislature required public health system to develop standards and performance measures.
- Created by local and state health officials in a multi-year process.
- Five areas covered:
  - Understanding health issues,
  - Protecting people from disease,
  - Assuring a safe and healthy environment,
  - Promoting healthy living, and
  - Helping people get the services they need.

Standards for Public Health in Washington State

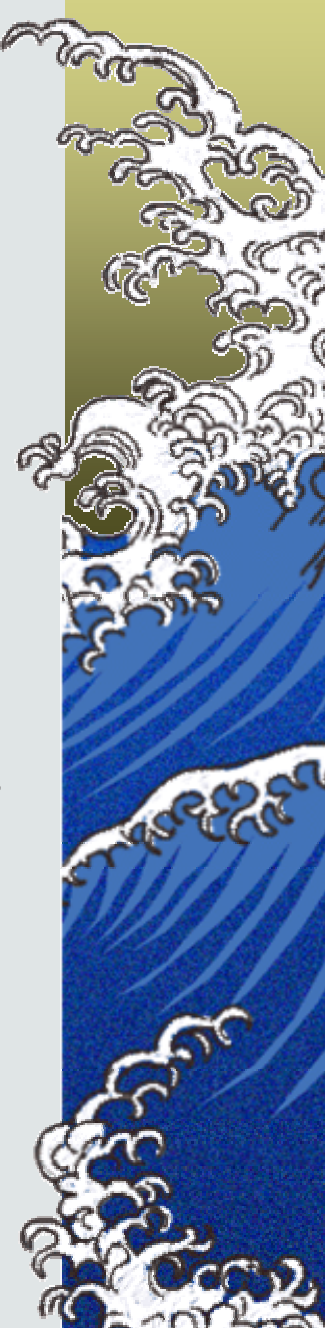
- For each area, overall standards are set for the public health system and specific performance measures are set for local and state agencies.
- Total of 23 standards in the five areas, with 98 performance measures for local health and 104 for the State.
- Baseline assessment conducted in 2002.

Protecting People from Disease

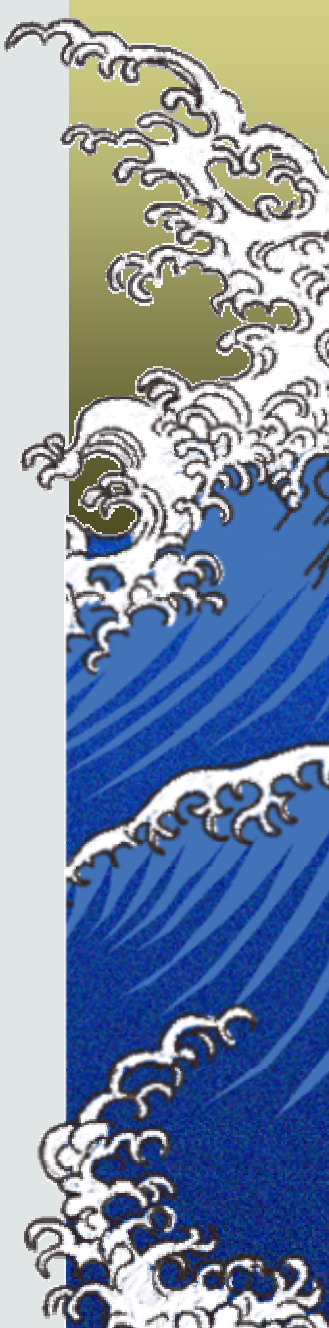
Standard 1: A surveillance and reporting system is maintained to identify emerging health threats.

Local Measure -- A communicable disease tracking system is used which documents the initial report, investigation, findings and subsequent reporting to state and federal agencies.

State Measure -- A statewide database for reportable conditions is maintained; surveillance data are summarized and disseminated to LHJs at least annually. Uniform data standards and case definitions are updated and published at least annually.

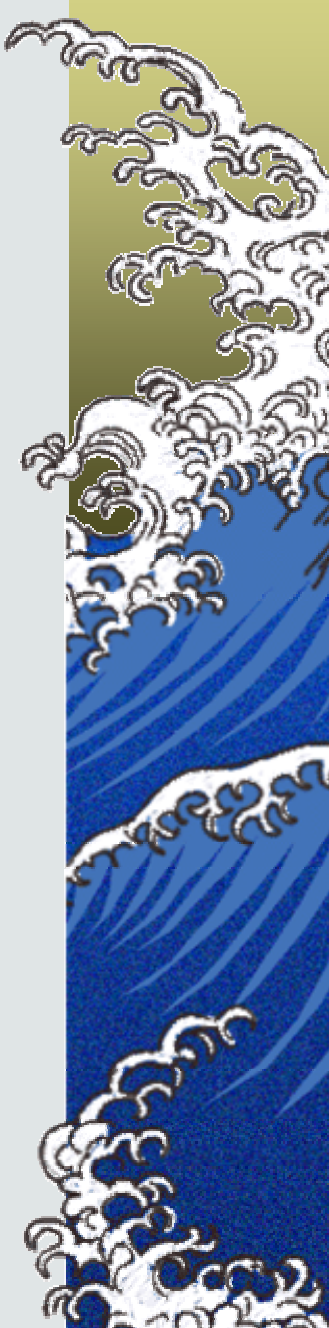


www.doh.wa.gov/PHIP/Standards/default.htm



Standards Support Standards

- Implementation of IT standards in Washington will help agencies comply with Public Health standards
- Same cultural change issues, whether for IT or Public Health Standards

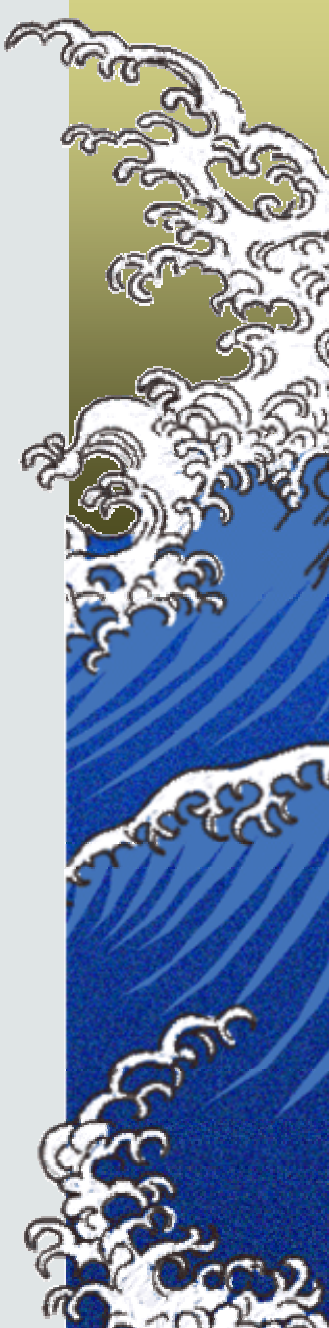


Public Health Issue Management System (PHIMS)

- Washington system being developed to support disease investigation and reporting by local health agencies.
- Following NEDSS standards.
- Will allow agencies to meet many of the PH standards:
  - Communicable disease tracking system
  - Statewide database for reportable conditions
  - Written disease investigation protocols

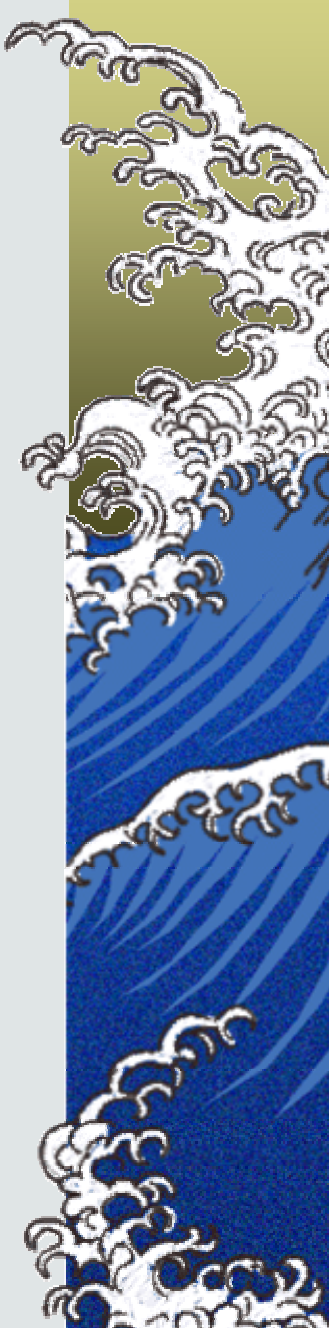
Workforce Considerations

- Understand that cultural change is as important as (and more difficult than) technology change.
- To help prepare staff for new information technology, focus on developing:
  - Basic understanding by all staff of purpose of standards (IT or other)
  - Basic understanding of application development process
  - Ability to accept and support change



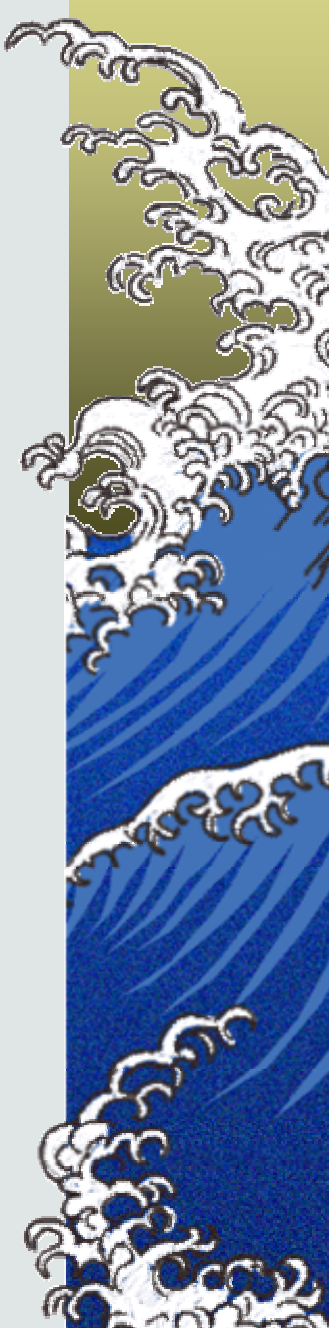
PH Informatics Competencies

- Public health informatics -- the systematic application of information and computer science and technology to public health practice, research, and learning.
- No consensus had been established on specific informatics competencies that various public health professionals should obtain.
- The PH Informatics Competencies provide a starting point in the development of new learning resources for public health professionals.



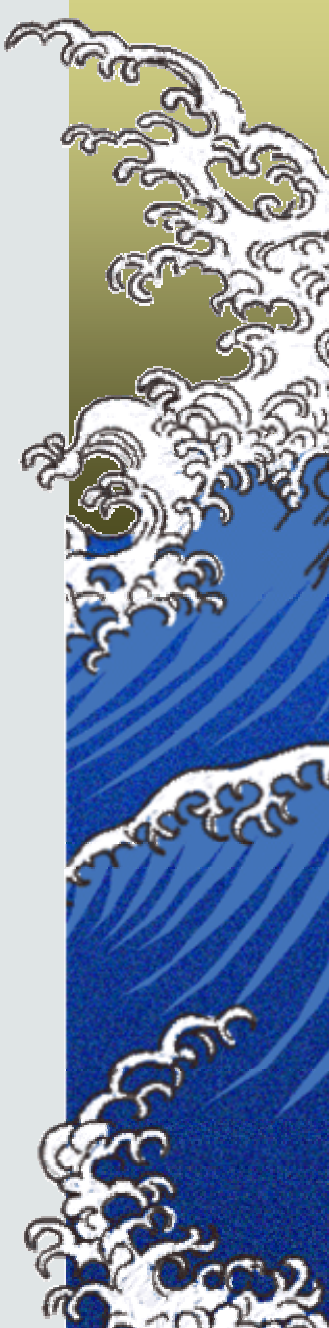
PH Informatics Competencies

- Class 1. Effective Use of Information
- Class 2. Effective Use of Information Technology
- Class 3. Effective Management of Information Technology Projects



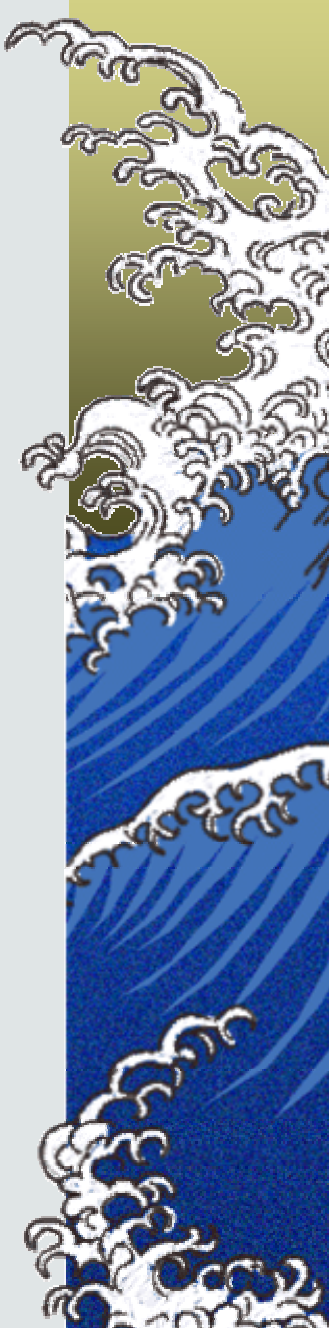
Examples Related to PHIN

- Security
  - Effective use of IT:
    - Data and System Protection – Utilizes information technology so as to ensure the integrity and protection of electronic files and computer systems
  - Effective management of IT projects:
    - Confidentiality and Security Systems – Applies and participates in developing confidentiality and privacy policies for the enterprise, and ensures the development of adequate security systems to support the implementation of those policies.

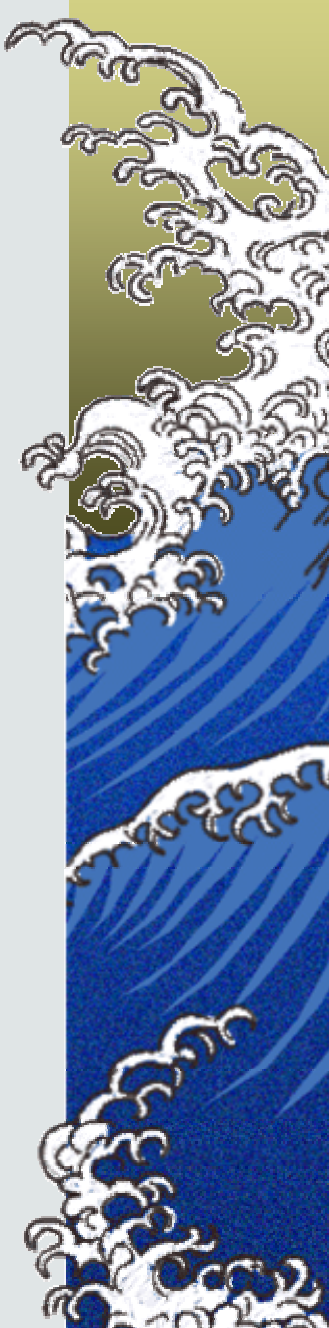


Examples Related to PHIN

- Data Standards
  - Effective use of IT:
    - Selection and use of IT tools – Appropriately selects and utilizes state-of-the-art software tools in support of public health data acquisition, entry, management, analysis, planning and reporting.
  - Effective management of IT projects:
    - Standards – Utilizes (or ensures the utilization of) data standards for storage and transmission, and is able to find the relevant standards or specifications as needed.

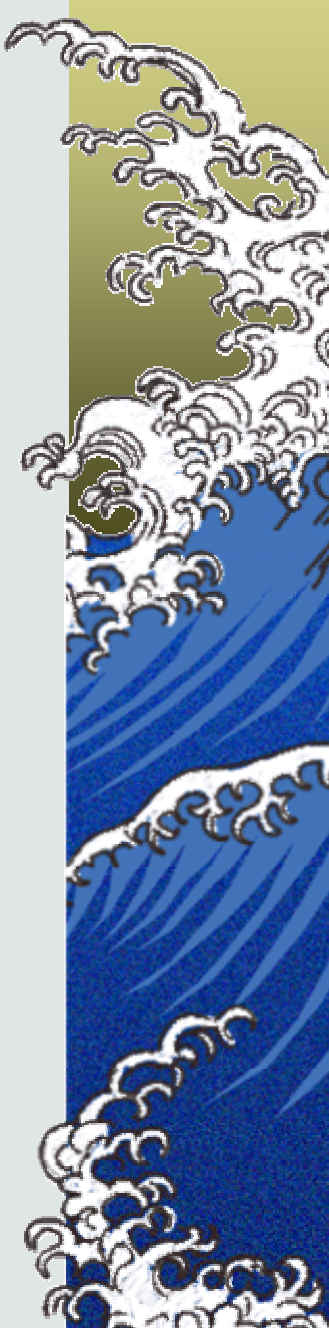


healthlinks.washington.edu/nwcphp/phi/comps/index.html



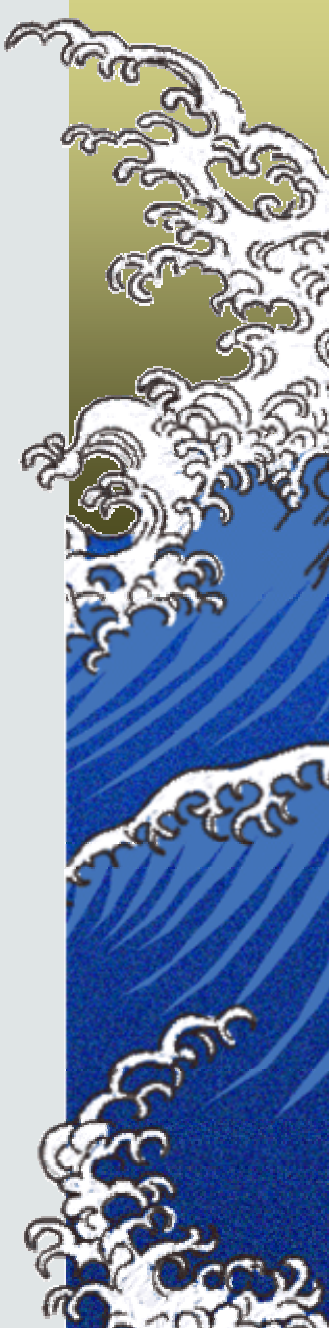
Recommendations

- Short-Term Issues: Actions necessary when implementing technology changes.
  - Acknowledge that new technology will bring many changes and prepare staff for those changes.
  - Involve staff in planning for implementation.
  - Communicate often.
  - Emphasize training:
    - Specific to new application
    - General to data and process standards
    - General to realities of application development



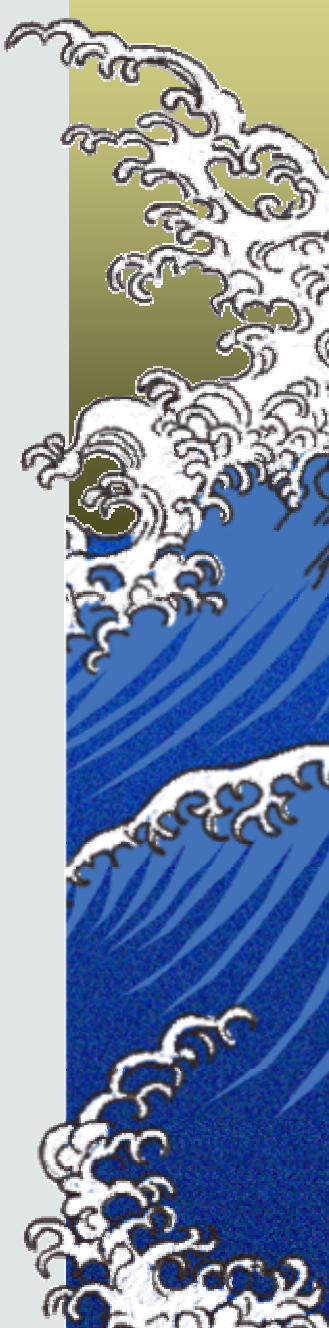
Recommendations

- Long-Term Issues: Actions necessary to assure a trained workforce.
  - Utilize PH informatics competencies to develop training and educational materials for public health workers (current and future).
  - Incorporate PH informatics competencies into training plans and position expectations.
  - Assure ample training is incorporated into all IT project plans.



Recommendations

- PHIN Issues: Actions necessary for implementation of PHIN.
  - Educate key public health officials about the PHIN (particularly review and implement Gartner recommendations).
  - Develop training/ communication materials on why standards in general and PHIN standards in particular are necessary.
  - Identify specific technical expertise necessary to implement PHIN standards in state and local health agencies.



Recommendations

To assure implementation of PHIN standards, assure buy-in of PHIN standards.